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Non Automatic Weighing Devices	Issued: 2008-01-01	Revision Number: 2	

## STP-25 Unattended Vehicle Scales

### REFERENCE

Sections 65 and 66 of the *Specifications Relating to Non-automatic Weighing Devices (1998)*.

### PURPOSE

Unattended vehicle scales are designed and installed to be used by vehicle operators who may not be properly trained to operate the scales. Hence, a certain level of automation is necessary to ensure accurate weighing. This procedure is to be used on scales that are designed and intended to function without an operator.

The purpose of this section is, therefore, to provide additional inspection procedures to be applied in conjunction with the procedures for attended vehicle scales.

**Note :** Inspections should be conducted with the assistance of a company representative responsible for the weighing system.

### REQUIREMENTS

The following requirements are in addition to those normally applicable to vehicle scales. Please note that the numbering of the following sections correspond to the numbering used in the *Approval Evaluation Manual - Non Automatic Weighing Devices*. A vehicle scale used in an unattended operation must:

25.1 - have an automatic means to indicate to the vehicle operator that the device has returned to zero. A system of red and green lights or a secondary weight display that is easily visible from the position where the vehicle stops, before driving onto the load receiving element, may be adequate;

25.2 - have an automatic means to prevent the indication and printing of a weight if the device has not returned to zero before the vehicle proceeds onto the scale;

25.3 - have an automatic means to prevent the indication and printing of a weight if the vehicle is not entirely supported by the load receiving element. The use of optical or magnetic detection devices, or gates, may be adequate;

25.4 - include a printer that, *upon demand*, automatically prints the gross weight and if a total price is recorded, the unit price; and

25.5 - be provided with a means for sealing the adjustment mechanisms of the vehicle detectors. This is critical since these detectors are used to validate/invalidate transactions.

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### PROCEDURES - AUTOMATIC ZERO INDICATION

#### Purpose

The purpose of this procedure is to ensure that the device has an automatic means to reset the indicating element to zero and indicate to the vehicle operator that the device has returned to zero, before the vehicle is authorized to proceed onto the scale.

- Ensure that the device is at zero load indicated.
- Place a load equivalent to 2e (verification scale intervals) on the load receiving element (e.g. 20 kg for a scale with 10 kg scale intervals).
- Using a vehicle, initiate the weighing cycle (if possible, use the same type of vehicle as that which will be used for trade transactions).
- Ensure that the indicator returns to zero and an indication of this is automatically provided to the vehicle operator before the vehicle is authorized to move onto the load receiving element.

### INTERPRETATION OF RESULTS

The system must provide the vehicle operator an indication that the vehicle may proceed onto the load receiving element only if the indicating element is at zero. This indication may be in the form of a gate, traffic light, etc.

### PROCEDURE - INDICATOR/PRINTER INHIBITION - OUT OF ZERO CONDITION

#### Purpose

The purpose of this procedure is to ensure that the device has an automatic means to prevent the indication and printing of a weight if the device has not returned to zero before the vehicle proceeds onto the load receiving element.

- Ensure that the device is at zero load indicated.
- Place a load equivalent to at least 2e (verification scale intervals) on the load receiving element (e.g. at least 20 kg for a scale with 10 kg scale intervals).
- Have a vehicle drive directly onto the load receiving element without waiting for the scale to return to zero.
- Attempt to print a weight ticket.

### INTERPRETATION OF RESULTS

The indicating element must not provide a weight indication, or if it is not feasible to prevent weight indication, there must be a suitable warning to the vehicle operator that the transaction is not acceptable (error message on computer screen, etc.). In either case, the printer must not print a weight ticket.

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## **STP-25 Unattended Vehicle Scales**

### **PROCEDURE - PERFORMANCE OF THE VEHICLE DETECTORS**

#### **Purpose**

The purpose of this procedure is to ensure that the device has an automatic means to prevent the indication and printing of a weight if the vehicle is not entirely supported by the load receiving element.

- Using a vehicle, initiate the weighing cycle and wait for the signal (e.g. light) to proceed onto the load receiving element (if possible, use the same type of vehicle as that which will be used for trade transactions).
- Position the vehicle on the load receiving element and note the weight indication.
- Slowly advance the vehicle until it comes off of the load receiving element and the weight indication decreases.
- Attempt to print a weight ticket.
- Run the same test by driving the vehicle onto the load receiving element from the opposite direction.

### **INTERPRETATION OF RESULTS**

The indicating element must not provide a weight indication when the vehicle is not entirely supported by the load receiving element, or if it is not feasible to prevent weight indication, there must be a suitable warning to the vehicle operator that the transaction is not acceptable (error message on computer screen, etc.). In either case, the printer must not print a weight ticket.

### **PROCEDURE - DEACTIVATION OF THE VEHICLE DETECTORS**

#### **Purpose**

The purpose of this procedure is to ensure that the automatic means of preventing the indication and printing of a weight, when a vehicle is not entirely supported by the load receiving element, remain active after their initial activation.

- Using a vehicle, initiate the weighing cycle and wait for the signal (e.g. light) to proceed onto the load receiving element (if possible, use the same type of vehicle as that which will be used for trade transactions).
- Position the vehicle on the load receiving element and note the weight indication.
- Have the vehicle advance slowly until the front axle is off the load receiving element.
- Have the vehicle slowly back up until it is again fully supported by the load receiving element.
- Advance the vehicle until the front axle is once again off the load receiving element.
- Attempt to print a weight ticket.
- If the system has a "cancel" or "back-up" option, ensure that it does not affect nor neutralize the operation of the vehicle detectors.

### **INTERPRETATION OF RESULTS**

The indicating element must not provide a weight indication when the vehicle is not entirely supported by the load receiving element, or if it is not feasible to prevent weight indication, there must be a suitable warning to the vehicle operator that the transaction is not acceptable (error message on computer screen, etc.). In either case, the printer must not print a weight ticket.

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**REVISION**

Rev 2.

- added clarification to *Interpretation of Results* when preventing indication is not feasible, a warning message may suffice.
- correct reference to *Specifications Relating to Non-automatic Weighing Devices (1998)*.

Rev 1.

- modified section 25.4 - added *upon demand* to requirement.